

DIRECTOR'S OFFICE

OCCUPATIONAL HEALTH STANDARDS — COKE OVEN EMISSIONS

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These rules become effective immediately upon filing with the Secretary of State unless adopted under sections 33, 44, or 45a(6) of 1969 PA 306.

Rules adopted under these sections become effective 7 days after filing with the Secretary of State.

(By authority conferred on the director of the department of **licensing and regulatory affairs** consumer and industry services by sections 14 and 24 of 1974 PA 154, and Executive Reorganization Order Nos. 1996-2, 2003-1, 2008-4, and 2011-4, MCL 445.2001, 445.2011, 445.2025, and 445.2030 MCL 408.1024, and Executive Reorganization Order Nos. 1996-1 and 1996-2, MCL 330.3101 and 445.2001)

R 325.50101, R 325.50102, R 325.50105, R 325.50106, R 325.50107, R 325.50108, R 325.50109, R 325.50110, R 325.50111, R 325.50114, R 325.50115, R 325.50116, R 325.50117, R 325.50118, R 325.50119, R 325.50121, R 325.50123, R 325.50124, R 325.50125, R 325.50128, R 325.50129, R 325.50130, R 325.50131, R 325.50132, R 325.50133, R 325.50134, R 325.50135 of the Michigan Administrative Code are amended, R 325.50100, R 325.50102a, R 325.50106a, and R 325.50129a. are added, and R 325.50136 is rescinded, as follows:

PART 314. COKE OVEN EMISSIONS

R 325.50100 Scope and application.

Rule 100. This rule applies to the control of employee exposure to coke oven emissions, except that this rule shall not apply to working conditions under which other federal and state agencies exercise statutory authority to prescribe or enforce standards affecting occupational safety and health.

R 325.50101 Definitions; A to E.

Rule 101. ~~As used in these rules:~~ (1)(a) "Authorized person" means a person specifically required by the employer to enter a regulated area or a person entering a regulated area as a designated representative of employees for the purpose of observing the monitoring and measuring procedures under R 325.50135.

(2)(b) "Beehive oven" means a coke oven in which the products of carbonization other than coke are not recovered, but are released into the ambient air.

(3)(c) "Coke oven" means a retort in which coke is produced by the destructive distillation or carbonization of coal.

(4)(d) "Coke oven battery" means a structure containing a number of slot-type coke ovens.

(5)(e) "Coke oven emissions" means the soluble fraction of total particulate matter present during the destructive distillation or carbonization of coal for the production of coke as determined by benzene extraction or an equivalent analytical method.

(6)(f) "Director" means the director of the Michigan department of **licensing and regulatory affairs** consumer and industry services or his or her authorized representative.

(7)(g) "Emergency" means an occurrence, such as, but not limited to, equipment failure, that is likely to, or does, result in a massive release of coke oven emissions.

(8)(h) "Existing coke oven battery" means a battery which is in operation or under construction on January 20, 1977, and which is not a rehabilitated coke oven battery.

R 325.50102 Definitions; G to S.

Rule 102. ~~As used in these rules:~~ (1)(a) "Green push" means coke that, when removed from the oven, results in emissions due to the presence of incompletely coked coal.

(b) "O.H. rule" means an occupational health rule adopted by reference in accordance with section 14 of 1974 PA 154, MCL 408.1014. Copies of these rules are available from the Michigan department of consumer and industry services.

(2)(c) "Pipeline charging" means an apparatus used to introduce coal into an oven which uses a pipe or duct permanently mounted onto an oven and through which coal is charged.

(3)(d) "Rehabilitated coke oven battery" means a battery that is rebuilt, overhauled, renovated, or restored from the pad up after January 20, 1977.

(4)(e) "Sequential charging" means a procedure, usually automatically timed, by which a predetermined volume of coal in each larry car hopper is introduced into an oven so that not more than 2 hoppers commence or finish discharging simultaneously although, at some point, all hoppers are discharging simultaneously.

(5)(f) "Stage charging" means a procedure by which a predetermined volume of coal in each larry car hopper is introduced into an oven so that not more than 2 hoppers are discharging simultaneously.

R 325.50102a MIOSHA standards by reference, appendices.

Rule 102a. (1) The following Michigan occupational safety and health administration (MIOSHA) standards are referenced in these rules. Up to 5 copies of these standards may be obtained at no charge from the Michigan Department of Licensing and Regulatory Affairs, MIOSHA Standards Section, 7150 Harris Drive, P.O. Box 30643, Lansing, MI, 48909-8143 or via the internet at website: www.michigan.gov/mioshastandards. For quantities greater than 5, the cost, at the time of adoption of these rules, is 4 cents per page.

(a) General Industry Safety Part 33 "Personal Protective Equipment," R 408.13301 to R 408.13398.

(b) Occupational Health Standard Part 430 "Hazard Communication," R 325.77001 to R 325.77003.

(c) Occupational Health Standard Part 451 "Respiratory Protection," being R 325.60051 to R 325.60052.

(d) Occupational Health Standard Part 470 "Employee Medical Records and Trade Secrets," R 325.3451 to R 325.3476.

(2) The information contained in the appendices to these rules is not intended, by itself, to create any additional obligations not otherwise imposed or to detract from any existing obligation.

R 325.50105 Exposure monitoring and measurements; accuracy of methods; notifications to employees; corrective actions.

Rule 105. (1) An employer who has a place of employment where coke oven emissions are present shall monitor employees working in the regulated area to measure their exposure to coke oven emissions.

(2) An employer shall obtain measurements which are representative of each employee's exposure to coke oven emissions over an 8-hour period. All measurements shall determine exposure without regard to the use of respiratory protection.

(3) An employer shall collect full-shift, ~~(for not less than 7 continuous hours)~~, personal samples, or shall employ other equivalent monitoring procedures, including at least 1 sample during each shift for each battery and each job classification, including maintenance personnel, within the regulated areas.

(4) An employer shall repeat the monitoring and measurements required by this rule at least once every 3 months.

(5) If a production, process, or control change is made which may result in new or additional exposure to coke oven emissions, or whenever the employer has any other reason to suspect an increase in employee exposure, the employer shall repeat the monitoring and measurements required by this rule for those employees affected by such change or suspected increase.

(6) An employer shall use a method of monitoring and measurement which has an accuracy, ~~(with a confidence level of 95%)~~, of not less than plus or minus 35% for concentrations of coke oven emissions greater than, or equal to 150 ug/m³.

(7) An employer shall, **within 15 working days after the receipt of the results of any monitoring performed under these rules, notify each affected employee of these results either individually in writing or by posting the results in an appropriate location that is accessible to employees.** ~~provide written notice to each employee of the exposure measurements which represent that employee's exposure within 5 working days after the receipt of the results of measurements required by this rule.~~

(8) If exposure measurements indicate that the representative employee exposure exceeds the permissible exposure limit, the employer shall, in such notification, inform each employee of that fact and of the corrective action being taken to reduce exposure to or below the permissible exposure limit.

R 325.50106 Compliance programs.

Rule 106. (1) An employer shall establish and implement a written program to reduce exposures to coke oven emissions solely by means of the engineering and work practice controls required in **R 325.50107 to R 325.50116.** ~~Rules 107 to 116.~~

(2) The written program shall include, at least **all of** the following:

(a) A description of each coke oven operation by battery, including, ~~work force and operating crew, coking time, operating procedures, and maintenance practices.~~

(b) Engineering plans and other studies used to determine the controls for the coke battery.

(c) A report of the technology considered in meeting the permissible exposure limit.

(d) A monitoring program in accordance with **R 325.50105.** ~~Rule 105.~~

(e) A detailed schedule for the implementation of the engineering and work practice controls required in **R 325.50110, R 325.50111, and R 325.50112.** ~~Rules 110, 111, and 112.~~

(f) Other relevant information.

(3) If, after implementing all controls required by **R 325.50110, R 325.50111, and R 325.50112,** ~~Rules 110, 111, and 112~~ or after completion of a new or rehabilitated battery, the permissible exposure limit is still exceeded, an employer shall develop a detailed written program and schedule for the implementation of any additional engineering controls and work practices necessary to reduce exposure to or below the permissible exposure limit.

(4) A written plan for a compliance program shall be submitted, upon request, to the director and shall be available at the worksite for examination and copying by the director, the employee, and the authorized representative. The plan shall be revised and updated at least **annually** ~~once every 6 months~~ to reflect the current status of the program.

R 325.50106a Methods of compliance and training.

Rule 106a. (1) An employer shall control employee exposure to coke oven emissions by the use of engineering controls, work practices and respiratory protection as described in R 325.50107.

(2) Training in compliance procedures. An employer shall incorporate all written procedures and schedules required in R 325.50106, R 325.50107, R 325.50108, R 325.50109, R 325.50110, R 325.50111, R 325.50112, R 325.50113, R 325.50114, R 325.50115, R 325.50116, and R 325.50120 in the information and training programs required under R 325.50128 and R 325.50129 and where appropriate, post in the regulated area.

R 325.50107 ~~Methods of compliance~~ **methods**; existing coke oven batteries.

Rule 107. (1) An employer shall institute the engineering and work practice controls listed in **R 325.50110, R 325.50111, and R 325.50112**, ~~Rules 110, 111, and 112~~ **in for** existing coke oven batteries at the earliest possible time, but not later than January 20, 1980, except to the extent that the employer can establish that such controls are not feasible.

(2) In determining the earliest possible time for institution of engineering and work practice controls, the requirement, effective August 27, 1971, to implement feasible administrative or engineering controls to reduce exposures to coal tar pitch volatiles, shall be considered. Wherever the engineering and work practice controls which can be instituted are not sufficient to reduce employee exposures to or below the permissible exposure limit, an employer shall nonetheless use them to reduce exposures to the lowest level achievable by these controls and shall supplement them by the use of respiratory protection which complies with the requirements of R 325.50117.

(3) The engineering and work practice controls required under R 325.50110, R 325.50111, and R 325.50112 are minimum requirements generally applicable to all existing coke oven batteries.

~~(4)(2)~~ If, after implementing all controls required by **R 325.50110, R 325.50111, and R 325.50112**, ~~Rules 110, 111, and 112~~ or after January 20, 1980, whichever is sooner, employee exposures still exceed the permissible exposure limit, an employer shall implement any other engineering and work practice controls necessary to reduce exposure to or below the permissible exposure limit, except to the extent that the employer can establish that such controls are not feasible.

~~(5)(3)~~ Where the engineering and work practice controls which can be instituted are not sufficient to reduce employee exposures to or below the permissible exposure limit, an employer shall nonetheless use them to reduce exposures to the lowest level achievable by these controls and shall supplement them by use of respiratory protection which complies with the requirements of **R 325.50117 to R 325.50119**. ~~Rules 117 to 119.~~

R 325.50108 Methods of compliance; new or rehabilitated coke oven batteries.

Rule 108. (1) An employer shall institute the best available engineering and work practice controls on all new or rehabilitated coke oven batteries to reduce and maintain employee exposure at or below the permissible exposure limit, except to the extent that the employer can establish that such controls are not feasible.

(2) If, after implementing the best available engineering and work practice controls required by these rules, employee exposures still exceed the permissible exposure limit, an employer shall implement any other engineering and work practice controls necessary to reduce exposure to or below the permissible exposure limit, except to the extent that the employer can establish that such controls are not feasible.

(3) If the engineering and work practice controls which can be instituted are not sufficient to reduce employee exposures to or below the permissible exposure limit, an employer shall nonetheless use them to reduce exposures to the lowest level achievable by these controls and shall supplement them by the use of respiratory protection which complies with the requirements of **R 325.50117 to R 325.50119**. ~~Rules 117 to 119.~~

R 325.50109 Methods of compliance; beehive ovens.

Rule 109. (1) An employer shall institute engineering and work practice controls on beehive ovens at the earliest possible time to reduce and maintain employee exposures at or below the permissible exposure limit, except to the extent that the employer can establish that such controls are not feasible.

(2) If, after implementing all engineering and work practice controls required by **subrule (1) of this rule**, ~~Rule 109(1)~~, employee exposures still exceed the permissible exposure limit, an employer shall implement any other engineering and work practice controls necessary to reduce exposures to or below the permissible exposure limit, except to the extent that the employer can establish that such controls are not feasible.

(3) If the engineering and work practice controls which can be instituted are not sufficient to reduce employee exposures to or below the permissible exposure limit, an employer shall nonetheless use them to reduce exposure to the lowest level achievable by these controls and shall supplement them by the use of respiratory protection which complies with the requirements of **R 325.50117 to R 325.50119**. ~~Rules 117 to 119.~~

(4) In determining the earliest possible time for institution of engineering and work practice controls, the requirement, effective August 27, 1971, to implement feasible administrative or engineering controls to reduce exposures to coal tar pitch volatiles, shall be considered.

R 325.50110 Existing coke oven battery; engineering controls during charging operations.

Rule 110. ~~(4)~~ An employer shall equip and operate existing coke oven batteries with all of the following engineering controls to control coke oven emissions during charging operations:

- (a) One of the following methods of charging **shall be used**:
 - (i) Stage charging as described in **R 408.50113(2)**. ~~Rule 113(2)~~.
 - (ii) Sequential charging as described in **R 408.50113(2)**, ~~Rule 113(2)~~, except that ~~Rule R 408.50113(2)(b)(iv)~~ does not apply to sequential charging.
 - (iii) Pipeline charging or other forms of enclosed charging in accordance with ~~Rule 110~~ **this rule** (1), except ~~Rules 110~~ ~~(4)~~ **subdivisions** (b), (d), (e), (f), and (h) **of this rule**, do not apply.
- (b) Drafting from 2 or more points in the oven being charged, through the use of double collector mains or a fixed or moveable jumper pipe system to another oven, to effectively remove the gases from the oven to the collector mains.
- (c) Aspiration systems designed and operated to provide sufficient negative pressure and flow volume to effectively move the gases evolved during charging into the collector mains, including sufficient steam pressure, and steam jets of sufficient diameter.
- (d) Mechanical volumetric controls on each larry car hopper to provide the proper amount of coal to be charged through each charging hole so that the tunnel head will be sufficient to permit the gases to move from the oven into the collector mains.
- (e) Devices to facilitate the rapid and continuous flow of coal into the oven being charged, such as stainless steel liners, coal vibrators, or pneumatic shells.
- (f) Individually operated larry car drop sleeves and slide gates or equivalent charge systems designed and maintained so that the gases are effectively removed from the oven into the collector mains.
- (g) Mechanized gooseneck and standpipe cleaners.
- (h) Air seals on the pusher machine leveler bars to control air infiltration during charging.
- (i) Roof carbon cutters or a compressed air system or both on the pusher machine rams to remove roof carbon.

R 325.50111 Existing coke oven battery; engineering controls during coking operations.

Rule 111. **The employer shall equip and operate existing coke oven batteries with all of the following engineering controls to control coke oven emissions during coking operations:** ~~An employer shall control coke oven emissions from existing coke oven batteries during coking operations by:~~

- (a) A pressure control system on each battery to obtain uniform collector main pressure.
- (b) Ready access to door repair facilities to facilitate the prompt and efficient repair of doors, door sealing edges, and all door parts.
- (c) An adequate number of spare doors available for replacement purposes.
- (d) Chuck door gaskets to control chuck door emissions until such door is repaired or replaced.
- (e) Heat shields on door machines.

R 325.50114 Work practice controls; coking.

Rule 114. An employer shall **operate existing coke oven batteries pursuant to a detailed written procedure established and implemented for the control of coke oven emissions during coking**, ~~establish and implement a detailed written coking procedure for existing coke oven batteries~~ consisting of at least **all of** the following elements:

- (a) Checking oven back pressure controls to maintain uniform pressure conditions in the collecting main.
- (b) Repair, replacement, and adjustment of oven doors and chuck doors, and replacement of door jambs to provide a continuous metal-to-metal fit.
- (c) Cleaning of oven doors, chuck doors, and door jambs after each coking cycle to provide an effective seal.
- (d) An inspection system and corrective action program to control door emissions to the maximum extent possible.
- (e) Luting of doors that are sealed by luting after each coking cycle and reluting, replacing, or adjusting as necessary to control leakage.

R 325.50115 Work practice controls; pushing.

Rule 115. An employer shall control coke oven emissions during pushing operations by quenching coke and coal spillage as soon as practicable and not shoveling them into a heated oven, and by a detailed written procedure for each battery established and implemented for the control of emissions during pushing consisting of the following elements:

- (a) Dampening off the ovens and removal of charging hole lids to effectively control coke oven emissions during the push.
- (b) Heating the coal charge uniformly for a sufficient period to obtain proper coking, including the prevention of green pushes.
- (c) **Preventing** ~~Prevention of~~ green pushes to the maximum extent possible.

(d) **Inspecting** inspection, **adjust** adjustment, and **correct** correction of heating flue temperatures and **defective** effective flues at least once weekly and after any green push, to prevent green pushes.

(e) Cleaning of heating flues and related equipment at least once weekly and after any green push to prevent green pushes.

R 325.50116 Work practice controls; maintenance and repair.

Rule 116. An employer shall **operate existing coke oven batteries pursuant to a detailed written procedure of maintenance and repair established and implemented for the effective control of coke oven emissions consisting** ~~establish and implement a detailed written procedure of maintenance for existing coke oven batteries which shall consist~~ of the following elements:

(a) Regular inspection of all controls, including goosenecks, standpipes, standpipe caps, charger hole lids and castings; regular inspection of jumper standings, jumper pipes, and air seals for cracks, misalignment, or other defects; and prompt implementation of the necessary repairs, **as soon as possible**.

(b) Maintaining the regulated area in a neat, orderly condition free of coal and coke spillage and debris.

(c) Regular inspection of the damper system, aspiration system, and collector main for cracks or leakage, and prompt implementation of the necessary repairs.

(d) Regular inspection of the heating system and prompt implementation of the necessary repairs.

(e) Prevention of miscellaneous fugitive topside emissions.

(f) Regular inspection and patching of oven brickwork.

(g) Maintenance of battery equipment and controls in good working order.

(h) Maintenance and repair of coke oven doors, chuck doors, door jambs, and seals.

(i) Installation of chuck door gaskets prior to the next coking cycle.

(j) Instituting and completing repairs as soon as possible, including temporary repair measures instituted and completed where necessary, which include, but are not limited to, the requirements of ~~subrules~~ **subdivisions** (e) and (i) of this rule.

R 325.50117 Respiratory protection.

Rule 117. (1) **For employees who use respirators required by these rules, an employer shall provide each employee an appropriate respirator that complies with the requirements of this rule. Respirators must be used during all of the following:** ~~If respiratory protection is required under these rules, then an employer shall provide, and assure the use of, respirators that comply with the requirements of R 325.60051 et seq. and these rules. An employer shall not use respirators to achieve compliance with the permissible exposure limit, except during any of the following:~~

(a) Periods necessary to install or implement feasible engineering and work practice controls.

(b) Work situations where feasible engineering and work practice controls are not yet sufficient to reduce exposure to or below the permissible exposure limit.

(c) Work operations such as maintenance and repair activity in which engineering and work practice controls are not technologically feasible.

(d) Emergencies.

(2) **An employer shall implement a respiratory protection program in accordance with Occupational Health Standard Part 451, "Respiratory Protection," rules § 1910.134(b) through (d) (except (d)(1)(iii)), and (f) through (m), as referenced in R 325.50102a, which covers each employee required by this section to use a respirator.** ~~If respirators are required, then an employer shall select, provide, and assure the use of, the appropriate respirator or combination of respirators on the basis of the table 1:~~

(3) **An employer shall select and provide to employees, the appropriate respirators specified in Occupational Health Standard Part 451, "Respiratory Protection," as referenced in R 325.50102a, subrule § 1910.134(d)(3)(i)(A); however, an employer may use a filtering facepiece respirator only when it functions as a filter respirator for coke oven emissions particulates.** ~~If a respirator is required by this rule for concentrations that are not more than 1500 µg/m³, an employer shall provide, at the option of each affected employee, either a particulate filter respirator or a powered air-purifying respirator as described in table 1.~~

Table 1. Respiratory Protection for Coke Oven Emissions	
Airborne Concentration of Coke Oven Emissions	Approved Respirator
(a) Any concentration	(1) A type C supplied-air respirator operated in pressure demand or other positive pressure or continuous flow mode; or (2) A powered air-purifying particulate filter respirator for dust and mist; or (3) A powered air-purifying particulate filter respirator or combination chemical cartridge and particulate filter respirator for coke oven emissions.
(b) Concentrations not more than 1500 µg/m ³	(1) Any particulate filter respirator for dust and mist, except single-use respirator; or (2) Any particulate filter respirator or combination chemical cartridge and particulate filter respirator for coke oven emissions; or (3) Any respirator listed in this rule.

R 325.50118 Protective clothing and equipment; provision and use.

Rule 118. An employer shall provide, and ~~assure~~ **ensure** the use of, appropriate protective clothing and equipment, such as, but not limited to, all of the following:

- (a) Flame-resistant jacket and pants.
- (b) Flame-resistant gloves.
- (c) Devices that insulate footwear from hot surfaces.
- (d) Face shields or vented goggles that comply with **General Industry Safety Standard Part 33 "Personal Protective Equipment," as referenced in R 325.50102a.** ~~R 408.13310 et seq. of the Michigan Administrative Code administered and enforced by the Michigan department of consumer and industry services.~~
- (e) Safety shoes that comply with **General Industry Safety Standard Part 33 "Personal Protective Equipment," as referenced in R 325.50102a.** ~~R 408.13301 et seq. of the Michigan Administrative Code administered and enforced by the Michigan department of consumer and industry services.~~
- (f) Protective helmets that comply with **General Industry Safety Standard Part 33 "Personal Protective Equipment," as referenced in R 325.50102a.** ~~the general industry rule R 408.13301 et seq. of the Michigan Administrative Code administered and enforced by the Michigan department of consumer and industry services.~~

R 325.50119 Protective clothing and equipment; cleaning and replacement.

Rule 119. Where protective clothing is required by these rules, an employer shall do all of the following:

- (a) Provide the protective clothing required by ~~Rule~~ **R 325.50118(a)** and (b) in a clean and dry condition at least once weekly.
- (b) Clean, launder, or dispose of protective clothing required by ~~Rule~~ **R 325.50118(a)** and (b).
- (c) Repair or replace the protective clothing and equipment as needed to maintain their effectiveness.
- (d) ~~Assure~~ **Ensure** that all protective clothing is removed at the completion of a work shift and only in change rooms required by these rules.
- (e) ~~Assure~~ **Ensure** that contaminated protective clothing which is to be cleaned, laundered, or disposed of, is placed in a closable container in the change room.
- (f) Inform any person who cleans or launders protective clothing required by this rule of the potentially harmful effects of exposure to coke oven emissions.

R 325.50121 Hygiene facilities and practices; change rooms, showers, and lavatories.

Rule 121. (1) An employer shall provide clean change rooms equipped with storage facilities for street clothes and separate storage facilities for protective clothing and equipment whenever employees are required to wear protective clothing and equipment in accordance with ~~Rule~~ **R 325.50118.**

(2) An employer shall ~~assure~~ **ensure** that employees working in a regulated area shower at the end of the work shift.

(3) An employer shall provide shower facilities in accordance with **R 325.47416 of Occupational Health Standard Part 474 "Sanitation," as referenced in R 325.50102a.** ~~O.H. rule 4201(4), Sanitation—washing facilities.~~

(4) An employer shall ~~assure~~ **ensure** that employees working in the regulated area wash their hands and face prior to eating.

(5) An employer shall provide lavatory facilities in accordance with **Occupational Health Standard Part 474 "Sanitation," as referenced in R 325.50102a.** ~~O.H. rule 4201(4), Sanitation—washing facilities.~~

(6) An employer shall provide lunchroom facilities which have a temperature controlled, positive-pressure, filtered air supply, and which are readily accessible to employees working in the regulated area.

R 325.50123 Medical surveillance; general requirements.

Rule 123. (1) An employer shall institute a medical surveillance program for all employees who are employed in a regulated area for not less than 30 days per year.

(2) This program shall provide that medical examinations and procedures in accordance with ~~Rule 123 subrule(1) of this rule~~ be made available, at the employer's cost, to each employee during scheduled working hours or at other times agreeable to both the employee and the employer.

(3) An employer shall inform an employee who refuses a required medical examination of the possible health consequences of such refusal and shall obtain a signed statement from the employee indicating that the employee understands the risk involved in the refusal to be examined.

(4) An employer shall ~~assure~~ **ensure** that all medical examinations and procedures are performed by, or under the supervision of, a licensed physician.

R 325.50124 Medical surveillance; initial examinations.

Rule 124. At the time of initial assignment to a regulated area or upon the institution of the medical surveillance program, an employer shall provide a medical examination for employees covered under R 325.50123(1) that includes at least all of the following elements:

(a) A work history and medical history that includes smoking history and the presence and degree of respiratory symptoms, such as breathlessness, cough, sputum production, and wheezing.

(b) A **standard** ~~14 by 17-inch~~ posterior-anterior chest x-ray. ~~film. An international labor office UICC/Cincinnati (ILO U/C) rating is recommended.~~

(c) Pulmonary function tests, including forced vital capacity (FVC) and forced expiratory volume at 1 second (FEV 1.0). The employer shall record the type of equipment used to perform the tests.

(d) Weight.

(e) A skin examination.

(f) Urinalysis for sugar, albumin, and hematuria.

(g) A urinary cytology examination.

R 325.50125 Medical surveillance; periodic examinations.

Rule 125. (1) An employer shall provide the examinations specified in R 325.50124(a) to (f) at least annually for employees covered under R 325.50123(1).

(2) An employer shall provide the examinations specified in R 325.50124 (a) ~~and (c)~~ to (g) at least ~~once annually~~ **semiannually** for employees who are 45 years of age or older or who have 5 or more years of employment in the regulated area.

(3) If an employee who is 45 years of age or older, or who has 5 or more years of employment in the regulated area, transfers or is transferred from employment in a regulated area, then the employer shall continue to provide the examinations specified in R 325.50124(a) to (g) ~~once annually~~ **semiannually** as long as the employee is employed by the same employer or a successor employer.

(4) If an employee has not taken the examinations specified in subrules (1) to (3) of this rule within the 6 months preceding the termination of employment, then the employer shall provide the examinations to the employee upon termination of employment.

R 325.50128 Employee information and training.

Rule 128. (1) An employer shall **train each employee who is employed in a regulated area in accordance with the requirements of these rules. The employer shall institute a training program and ensure employee participation in the program.** ~~institute a training program for employees who are employed in a regulated area and shall assure their participation.~~

(2) The training program shall be provided as of **January 27, 1977** ~~the effective date of these rules~~ for employees who are employed in the regulated area at that time or at the time of initial assignment to a regulated area.

(3) The training program shall be provided at least annually for all employees who are employed in the regulated area, except that training regarding the occupational safety and health hazards associated with exposure to coke oven emissions and the purpose, proper use, and limitations of respiratory protective devices shall be provided at least quarterly for the first year after the initiation of the training program.

(4) The training program shall include informing each employee of all of the following:

(a) The information contained in the substance information sheet for coke oven emissions. **(Appendix A);**

(b) The purpose, proper use, and limitations of respiratory protective devices required in accordance with ~~Rules~~ **R 325.50117 to R 325.50119.**

(c) The purpose for and a description of the medical surveillance program required by ~~Rules R 325.50123 to R 325.50127~~, including information on the occupational safety and health hazards associated with exposure to coke oven emissions.

(d) A review of all written procedures and schedules required under ~~Rules R 325.50106 to R 325.50116~~.

(e) A review of these rules.

R 325.50129 Access to training materials.

Rule 129. (1) An employer shall make a copy of these rules, **and its appendixes**, the substance information sheet, and the air monitoring and medical surveillance guide for coke oven emissions, readily available to all persons employed in the regulated area.

(2) An employer shall provide, upon request, all materials relating to the employee information and training program to the director.

HAZARD COMMUNICATION

R 325.50129a Communication of hazards.

Rule 129a. (1) An employer shall include coke oven emissions in the program established to comply with the Occupational Health Standard Part 430 "Hazard Communication," as referenced in R 325.50102a.

(2) An employer shall ensure that each employee has access to labels on containers of chemicals and substances associated with coke oven processes and to safety data sheets, and is trained in accordance with R 325.50128 and the provisions of Occupational Health Standard Part 430 "Hazard Communication," as referenced in R 325.50102a.

(3) An employer shall ensure that, at least, the hazard of cancer is addressed.

R 325.50130 Precautionary signs and labels.

Rule 130. (1) An employer shall post signs in the regulated area bearing the legend:

<p>DANGER COKE OVEN EMISSIONS MAY CAUSE CANCER DO NOT EAT, DRINK OR SMOKE WEAR RESPIRATORY PROTECTION IN THIS AREA AUTHORIZED PERSONNEL ONLY</p>

(2) An employer shall post signs in the areas where the permissible exposure limit is exceeded bearing the legend:

<p>WEAR RESPIRATORY PROTECTION IN THIS AREA</p>
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~~(3)~~(4) An employer shall ~~assure~~ **ensure** that a statement does not appear on or near any sign required by these rules which contradicts or detracts from the effects of the required sign.

~~(4)~~(2) An employer shall ~~assure~~ **ensure** that signs required by these rules are illuminated and cleaned as necessary so that the legend is readily visible.

~~(5)~~(3) **Prior to June 1, 2016, employers may use the following legend in lieu of that specified in subrule (1) of this rule:** ~~An employer shall post signs in the regulated area bearing the following legends:~~

<p>DANGER CANCER HAZARD AUTHORIZED PERSONNEL ONLY NO SMOKING OR EATING</p>

~~(6)~~(4) **Prior to June 1, 2016, employers may use the following legend in lieu of that specified in subrule (2) of this rule:** ~~In addition, the employer shall post signs in the areas where the permissible exposure limit is exceeded bearing the legend:~~

<p>DANGER RESPIRATOR REQUIRED</p>
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(7) An employer shall ensure that labels of containers of contaminated protective clothing and equipment include the following information:

**CONTAMINATED WITH COKE EMISSIONS
MAY CAUSE CANCER
DO NOT REMOVE DUST BY BLOWING OR SHAKING**

(8)(5) Prior to June 1, 2015, employers may include the following information on contaminated protective clothing and equipment in lieu of the labeling requirements in subrule (7) of this rule: ~~The employer shall apply precautionary labels to all containers of protective clothing contaminated with coke oven emissions bearing the following legend:~~

**CAUTION
CLOTHING CONTAMINATED WITH COKE EMISSIONS
DO NOT REMOVE DUST BY BLOWING OR SHAKING**

R 325.50131 **Recordkeeping**, exposure measurements.

Rule 131. (1) An employer shall establish and maintain an accurate record of all measurements taken to monitor employee exposure to coke oven emissions required in ~~Rule R 325.50105~~.

(2) The record shall include all of the following:

- (a) Name, social security number, and job classification of the employees monitored.
- (b) The date or dates, number, duration, and results of each of the samples taken, including a description of the sampling procedure used to determine representative employee exposure where applicable.
- (c) The type of respiratory protective devices worn, if any.
- (d) A description of the sampling and analytical methods used and evidence of their accuracy.
- (e) The environmental variables that could affect the measurement of employee exposure.

(3)(2) An employer shall maintain this record for not less than 40 years or for the duration of employment plus 20 years, whichever period is longer.

R 325.50132 Medical records.

Rule 132. (1) An employer shall establish and maintain an accurate record for each employee subject to medical surveillance as required by ~~Rule R 325.50123(4)~~ to **R 325.50137**.

(2) The record shall include all of the following:

- (a) The name, social security number, and description of duties of the employee.
- (b) A copy of the physician's written opinion.
- (c) The signed statement of any refusal to take a medical examination under ~~Rule R 325.50123(3)~~.
- (d) Any employee medical complaints related to exposure to coke oven emissions.

(3)(2) An employer shall keep, or ~~assure~~ **ensure** that the examining physician keeps, all of the following medical records:

- (a) A copy of the medical examination results, including medical and work history required under ~~Rule R 325.50124~~.

~~(1)(a)~~

(b) A description of the laboratory procedures used and a copy of any standards or guidelines used to interpret the test results.

- (c) The initial X-ray film.
- (d) The X-ray films for the most recent 5 years.
- (e) Any X-ray film with a demonstrated abnormality and all subsequent films.
- (f) The initial cytologic examination slide and written description.
- (g) The cytologic examination slides and written descriptions for the most recent 10 years.
- (h) Any cytologic examination slides with demonstrated atypia, if such atypia persists for 3 years, and all subsequent slides and written descriptions.

(4)(3) ~~The~~ **An** employer shall maintain medical records required under this rule for not less than 40 years, or for the duration of employment plus 20 years, whichever period is longer.

R 325.50133 Availability of records.

Rule 133. (1) An employer shall make available upon request all records required to be maintained by ~~Rules R 325.50131 to R 325.5034 432~~ to the director for examination and copying.

(2) An employer shall make available, upon request, records of employee exposure measurements required by ~~Rule R 325.50131~~ for inspection and copying to affected employees and their designated representatives.

(3) An employer shall make available upon request employee medical records required to be maintained by ~~Rule R 325.50132~~ to a physician designated by the affected employee or former employee.

(4) An employer shall make available upon request records of employee exposure measurements required by Rule R 325.50131 for inspection and copying to former employees and their designated representatives which indicate the former employees' own exposures.

(5) Employee exposure measurement records and employee medical records required by these rules shall be provided upon request to employees, designated representatives, and the director in accordance with Occupational Health Standard Part 470 "Employee Medical Records and Trade Secrets," as referenced in R 325.50102a.

~~R 325.50134 Transfer of records~~ **Retention and transfer of records.**

Rule 134. (1) If an employer ceases to do business, the successor employer shall receive and retain all records required to be maintained by Rules R 325.50131 to R 325.50134. ~~and 132.~~

~~(2) If an employer ceases to do business and there is no successor employer to receive and retain the records for the prescribed period, these records shall be transmitted by registered mail to the director.~~

~~(3) At the expiration of the retention period for the records required to be maintained under Rules 131 and 132, an employer shall transmit the records by registered mail to the director or shall continue to retain such records.~~

(2) An employer shall comply with any additional requirements involving the transfer of records set forth in Occupational Health Standard Part 470 "Employee Medical Records and Trade Secrets," as referenced in R 325.50102a.

R 325.50135 Observations of monitoring.

Rule 135. (1) An employer shall provide affected employees or their representatives an opportunity to observe any measuring or monitoring of employee exposure to coke oven emissions conducted pursuant to Rule R 325.50105.

(2) If observation of the measuring or monitoring of employee exposure to coke oven emissions requires entry into an area where the use of protective clothing or equipment is required, an employer shall provide the observer with, and assure the use of, such equipment and shall require the observer to comply with all other applicable safety and health procedures.

(3) Without interfering with the measurement, an observer shall be entitled to all of the following:

(a) An explanation of the measurement procedures.

(b) Observe all steps related to the measurement of coke oven emissions performed at the place of exposure.

(c) Record the results obtained.

R 325.50136 **Rescinded.** ~~Availability of rules, information sheets, and guides~~

~~Rule 136. (1) A copy of these rules, the substance information sheet, and the air monitoring and medical surveillance guides for coke oven emissions shall be provided to each employer by the Michigan Department of Consumer and Industry Services, P.O. Box 30643, Lansing, Michigan 48909.~~

~~(2) Permission to reproduce each or all of these documents in full is granted by the director~~